

Docket No. CHMP-102D

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kenneth A. Pieroni et al )  
Serial No.: Unknown )  
Filing Date: On even date herewith )  
For: SMOKE AND CLEAN AIR )  
GENERATING MACHINE FOR )  
DETECTING THE PRESENCE AND )  
LOCATION OF LEAKS )

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PRELIMINARY AMENDMENT

Box: No Amendment Fee  
 Assistant Commissioner of Patents  
U.S. Patent and Trademark Office  
Washington, D.C. 20231

Dear Sir:

Prior to the examination of the above-identified patent application, please amend this application as follows:

IN THE SPECIFICATION

Please add the following paragraph:

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a Division of Application No. 09/348,320 filed July 7, 1999.

IN THE CLAIMS

Cancel Claims 1-10, without prejudice.

Please add the following new set of Claims 19-28:

19. Apparatus to test for the presence of leaks in the evaporative system of a motor vehicle, said apparatus comprising:
- a source of gas under pressure connected to the evaporative system under test by way of a gas supply line interconnected therebetween so as to pressurize the evaporative system under test; and
- a gas flow meter located in the gas supply line between said source of gas under pressure and the evaporative system under test, said gas flow meter providing a reading that is indicative of a leak within the evaporative system under test, the magnitude of said reading determining whether the leak is in need of repair.
20. The apparatus recited in Claim 19, wherein said gas flow meter is a non-regulating flow meter having a moving ball indicator, the movement of said ball indicator providing a visual reading of the flow of gas under pressure to the evaporative system under test and an indication of whether the evaporative system under test has a leak that is in need of repair.
21. The apparatus recited in Claim 19, wherein said source of gas under pressure is a source of nitrogen gas.
22. The apparatus recited in Claim 19, further comprising a unidirectional check valve located in the gas supply line between said gas flow meter and the evaporative system under test to prevent the flow of gas in a direction away from the evaporative system under test and towards said gas flow meter.
23. The apparatus recited in Claim 19, further comprising a gas accumulator located in the gas supply line between said source of gas under pressure and said gas flow meter, said gas accumular having a chamber within which to dampen fluctuations and pulsations in the flow of gas under pressure from said source thereof to said gas flow meter.

24. The apparatus recited in Claim 23, further comprising a check valve coupled to said gas accumulator by which to relieve excessive pressure in the gas supply line between said source of gas under pressure and the evaporative system under test.

25. The apparatus recited in claim 19, further comprising a multi-position selector valve located in the gas supply line between said source of gas under pressure and said gas flow meter, said multi-position selector valve being moved to a first position at which to connect said source of gas under pressure to said gas flow meter, and said multi-position selector valve being moved to a second position at which to disconnect said source of gas under pressure from said gas flow meter.

26. The apparatus recited in claim 19, wherein said evaporative system of a motor vehicle under test is the fuel vapor recovery system.

27. A method for testing for the presence of leaks in the evaporative system of a motor vehicle, said method comprising the steps of:

supplying a gas under pressure to the evaporative system under test by way of a gas supply line connected therebetween so as to pressurize the evaporative system under test;

locating a gas flow meter in the gas supply line between said source of gas under pressure and the evaporative system under test and monitoring the flow of gas therebetween, said gas flow meter providing a reading that is indicative of a leak within the evaporative system under test; and

comparing the magnitude of said reading with a pre-determined magnitude that is determined when the evaporative system under test has an acceptable leak for deciding whether the indicated leak is in need of repair.

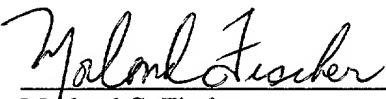
28. The method recited in Claim 27, wherein the evaporative system of a motor vehicle under test is the fuel vapor recovery system.

REMARKS

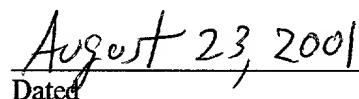
The claims pending in this patent application are now Claims 11-28. Original Claims 1-10 have been cancelled. Claims 19-28 are recited for the first time.

Each of Claims 11-28 refers to the "clean air" side of the applicants' invention shown in FIG. 1, including the recitation of a gas flow meter (32) connected between a source of gas and the evaporative system of a motor vehicle under test for leaks. By virtue of the gas flow meter, technicians will be provided with a visual indication of whether the evaporative system under test has a leak and the size of such leak so that a decision to repair the leak can be made. It is believed that the inclusion of said gas flow meter to indicate leaks in the evaporative system (e.g. the fuel vapor recovery system) of a motor vehicle is patentable over the patents that are currently known to the applicants. Accordingly, a favorable action is earnestly solicited following an examination of this application.

Respectfully submitted,



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Dated